

A NEW GENUS AND SPECIES OF COLEOPTEROID OZOPHORINE FROM MEXICO (HEMIPTERA: LYGAEIDAE)

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Abstract.—A new genus and species, *Brailovskycoris curculionoides*, is described from the mountains of Oaxaca, Mexico. It is placed in the lygaeid tribe Ozophorini of the subfamily Rhyparochrominae. Comments are made on the extreme coleoptery shown and habitats and examples of such conditions discussed. Figures are included of the entire insect and details of the abdomen and genital capsule.

Through the kindness of Dr. Roy Danielsson of Lund University I have been able to examine a series of remarkable coleopteroid lygaeids from the mountains of Oaxaca, Mexico.

Slater (1985) described as *Icaracoris montanus* a completely flightless coleopteroid lygaeid taken at 12,000 ft in the mountains of Colombia. I placed the genus in the tribe Ozophorini with some hesitation because of the loss of several diagnostic features due to modifications (presumably) in the development of the coleopteroid body form.

DIAGNOSIS

The species described below shows as great a degree of coleoptery as does *Icaracoris*, but retains a complete trichobothrial component (Fig. 2) together with many modifications also seen in *Icaracoris*. This strengthens the placement of both genera in the tribe Ozophorini.

While, as noted by Slater (1985), it is true that the Ozophorini is defined (in the absence of nymphs) chiefly by the loss of the abdominal inner laterotergites, there are several features that indicate placement of these taxa in that tribe. The presence of all ventral spiracles precludes all Neotropical tribes but the Antillocorini, Lethaeini and Plinthisini. The latter have an intersegmental membrane in the abdomen. The Antillocorini have inner laterotergites. The Lethaeini have linear abdominal trichobothria and a reduced posterior abdominal scent gland.

Most rhyparochromine taxa that possess a Y-suture in the nymph also have the anterior scent gland scar in the adult much larger than the scars between terga 4-5 and 5-6. This is true of *Icaracoris*, but it is of little value in determining the position of the present genus as the scent gland scars (and presumably the nymphal scent glands) are very reduced, due to the extreme desclerotization of the abdominal tergum. In addition to the lack of inner laterotergites, the ventral position of the spiracles, the trichobothria in the plesiomorphic position and the spines on the forefemur set upon distinct tubercles all support the placement of the genus in the Ozophorini. This combination of characters is a common situation in the Ozophorini, but is not, to my knowledge, present in other tribes of Neotropical Lygaeidae with ventral spiracles.

Since Ozophorini are abundant, diverse and apparently of very long occurrence in the Neotropics it is not surprising that highly modified montane taxa occur. Indeed a number of other genera of Ozophorini possess a flightless morph, although the body modifications are less extreme than in *Icaracoris* and the genus described below. For example, species of *Balboa* Distant, *Ozophora* Uhler, *Bergidea* Breddin, *Micrymenus* Bergroth and *Allotrophora* Slater & Brailovsky all contain species that have modified forewings (sometimes coleopteroid) and are flightless.

Brailovskycoris, new genus

Type species: *Brailovskycoris curculionoides*, new species.

Body short, elliptical, strongly convex. Head markedly declivent; eyes sessile; vertex tumidly convex. No ocelli. Bucculae strongly produced downward at anterior end. Pronotum not separated into anterior and posterior lobes; calli large, swollen particularly mesally to form a median trough between them; lateral pronotal margins sharply carinate. Prothorax less thickened dorso-ventrally than mesothorax, metathorax and abdomen. Scutellum lacking a median carina; basal half depressed, distal half elevated evenly to apex. Hemelytron consisting of a strongly convex, coarsely punctatae beetle-like structure. Each hemelytron meeting evenly at midline for most of length. Clavus and corium completely fused, but claval suture presumably represented by an elevated pale calloused stripe. No membrane present. Hemelytra extending posteriorly to 7th abdominal tergum. Hind wings absent. Metathoracic scent gland auricle curving slightly and evenly caudad. Evaporative area small, truncate at outer margin, extending dorso-laterad only over inner half of metapleuron, present on posterior rim of mesopleuron. Forefemora with 2 large spines arising from tubercles ventrally on distal $\frac{1}{3}$. Abdominal terga 2 through 5 largely desclerotized sclerotization on terga 3, 4 and 5 reduced to transversely quadrate or elliptical mesal plates (Fig. 3). Dorsal abdominal scent gland scars present between terga 3-4, 4-5 and 5-6, but minute (Fig. 3). No inner laterotergites present. All spiracles ventral and located below sternal shelf (Fig. 2). Trichobothria with a pair of posterior trichobothria located one above the other and posterior to spiracle on sterna 5, 6 and 7 (Fig. 2). Male genital capsule with a rounded posterior projection (Figs. 4, 5).

Despite a similar forewing modification *Brailovskycoris* and *Icaracoris* are not closely related. The latter has mutic forefemora, a much larger anterior abdominal scent gland scar between terga 3-4 than between terga 4-5 and 5-6; a deeply concave posterior pronotal margin, a short almost circular metathoracic scent gland auricle, long conspicuous hairs on the dorsal body surface, a tylus that attains or exceeds the end of the first antennal segment, an evenly convex pronotum with lateral margins produced and "flange-like."

There is no obvious ozophorine that appears to be the sister group of this highly modified species.

As noted by Slater (1985) such extreme coleoptery is usually accompanied by loss of, or extreme reduction of, the hind wing and often by a partially desclerotized abdominal tergum. Such lygaeids appear to occur primarily, if not exclusively, in two habitats. First, at high elevations in mountains (*Icaracoris*; *Brailovskycoris*, undescribed species of Antillocorini—Neotropics; *Microlugenocoris* Scudder; *Scolopostethus coleoptratus* Slater; undescribed species of Lethaeini—Ethiopian. Second, in

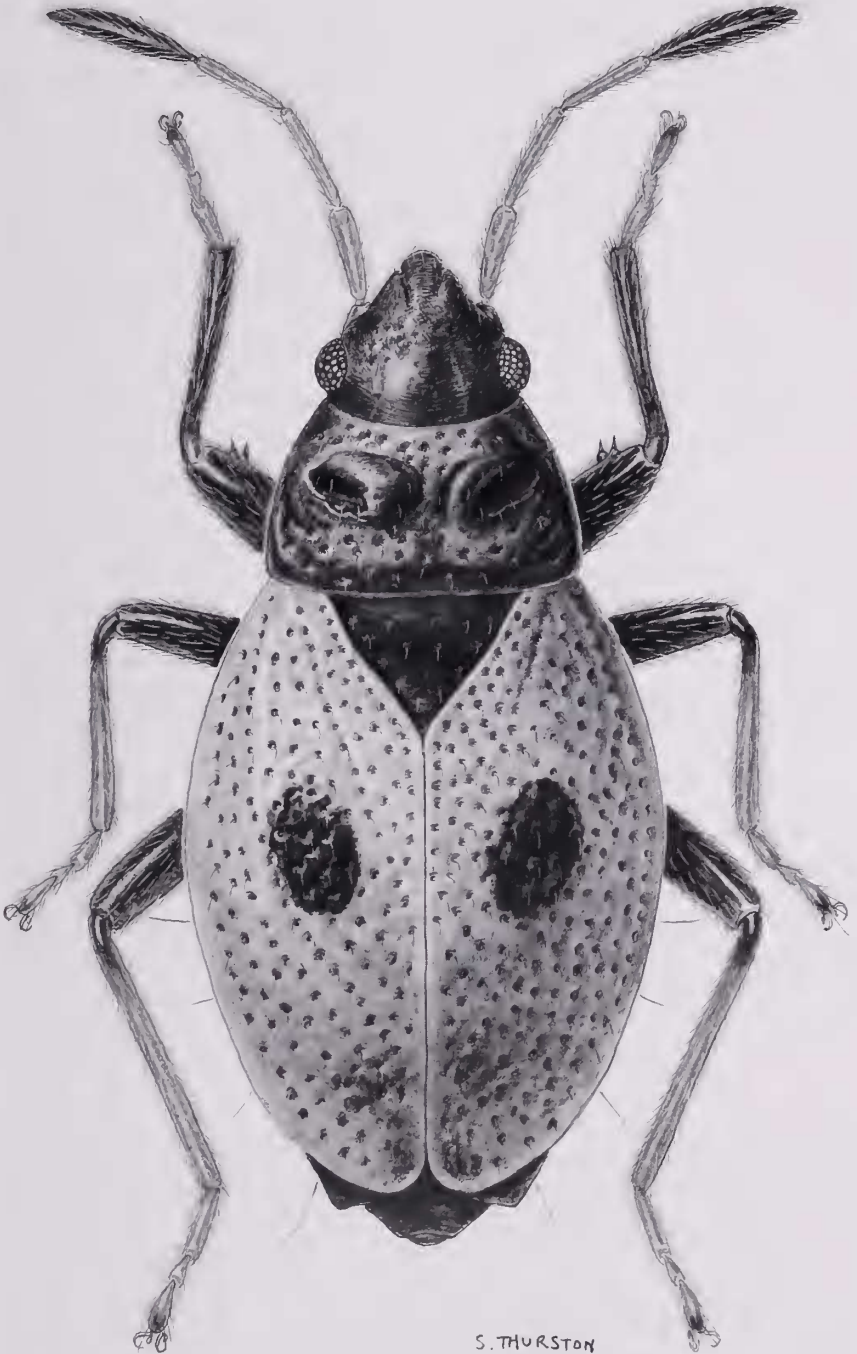
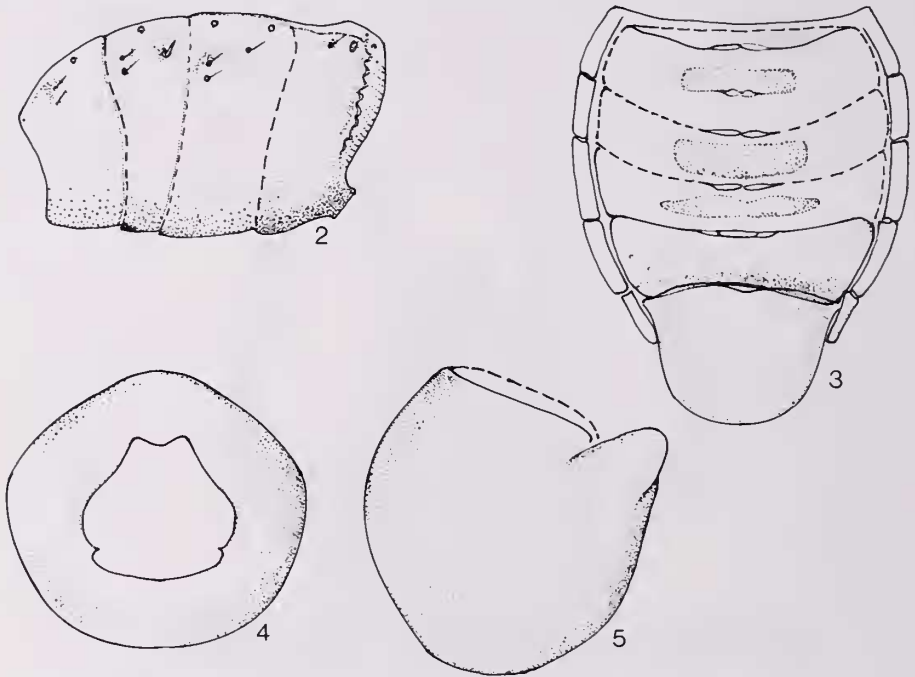


Fig. 1. *Brailovskycoris curculionoides*, new species, dorsal view.



Figs. 2-5. *Brailovskyocoris curculionoides* new species. 2. Abdomen, lateral view. 3. Abdomen, dorsal view. 4. Genital capsule, dorsal view. 5. Genital capsule, lateral view.

xeric habitats of long time ecological stability (*Coleocoris* Gross; *Carabocoris* Gross—Australia; *Saxicoris* Slater, *Psammium* Breddin—south western Africa; *Sympeplus* Bergroth—India). (However, in other families of Hemiptera coleoptery occurs under very different conditions).

This remarkable genus is named for my good friend and colleague Dr. Harry Brailovsky of the University of Mexico in recognition of his major contributions to our knowledge of Mexican and Neotropical Hemiptera.

***Brailovskyocoris curculionoides*, new species**

(Fig. 1)

Head, pronotal calli, scutellum, a large spot near middle of each hemelytron, a smaller spot on either side of midline near apex of each hemelytron, all femora, fore and middle tibiae, proximal and distal ends of hind tibiae, fourth antennal segments, labium and entire pleural and sternal surfaces black to dark chocolate brown. Remainder of dorsal surface a strongly contrasting mottled yellowish to reddish brown with irregular calloused white maculae on hemelytra adjacent to scutellum, posterior to and slightly mesad of black hemelytral patches and as an elevated stripe outlining fused claval suture. Tarsi and shaft of hind tibiae and antennal segments 1, 2 and 3 yellow. Entire body surface deeply and coarsely punctate. Surface subshining, no

pruinosity present. Appearing glabrous, but with minute hairs arising from many punctures.

Eyes small, set slightly away from antero-lateral margins of pronotum. Tylus attaining middle of first antennal segment. Length head 0.60, width 0.66, interocular space 0.40. Inner portion of pronotal calli and dark spots on hemelytra swollen to give a "lumpy" appearance to convex body surface. Anterior pronotal collar poorly differentiated, lacking a deep impressed posterior line; lateral pronotal margins evenly rounded, posterior margin straight. Length pronotum 0.50, width 0.92. Length scutellum 0.42, width 0.52. Hemelytral surface most strongly convex at middle, sloping downward both anteriorly and posteriorly; lateral margins carinate, evenly and broadly rounded, strongly tapered to posterior end. Length wing pad 1.68. Length "claval commissure" 1.26. Labium extending between metacoxae. Approximate length labial segments I 0.36, II 0.36, III 0.24, IV 0.20. Antennae terete, fourth segment broadly fusiform. Length antennal segments I 0.30, II 0.38, III 0.32, IV 0.42. Total body length 2.64.

Holotype: Male. MEXICO: *Oaxaca*: 57 km. S. Valle Nacional. 2600 m. 13.XI.1989. (R. Baranowski). In Lund University Museum.

Paratypes: MEXICO: *Oaxaca*: 2 males, 2 females. 58 km. S. Valle Nacional. 2,700 m. 10.XI.1989. (R. Baranowski). 1 female same except 7. IX.1986. 1 female. 61 km. S. Valle Nacional. 2,900 m. 10. XI.1989. (R. Baranowski). In Lund University and J. A. Slater collections.

These remarkable beetle-like lygaeids are apparently adapted for living at high altitudes. As can be seen above the type series was taken at 3 separate localities (and in two different years) at 9,000 ft or above. The beetle resemblance is enhanced by the convexity and "bumpiness" of the fore wings and the reduction in depth of the prothorax.

It seems unlikely that given the extreme modifications in both sexes that a macrop-terous morph exists.

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